ONTARIO CANCER FACTS

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Incidence of esophageal adenocarcinoma continues to rise

APR 2019

Highlights

- The incidence of esophageal adenocarcinoma, the most common type of esophageal cancer in Ontario, continues to increase significantly.
- This increase may be due to rising obesity, gastroesophageal reflux disease (GERD) and Barrett's esophagus.
- Cancer Care Ontario is working with its stakeholders to help reduce obesity and chronic disease, such as esophageal cancer.

Adenocarcinoma of the esophagus – 1 of the 2 main types of esophageal cancer – continues to increase, making it the most common subtype of esophageal cancer in Ontario. The rate of new cases, or incidence, of adenocarcinoma increased significantly at 5.3% per year from 1981 to 1998; it continued to increase significantly at a lower rate of 1.9% per year from 1998 to 2016, despite some fluctuations in the annual rates starting in 2011.

Citation

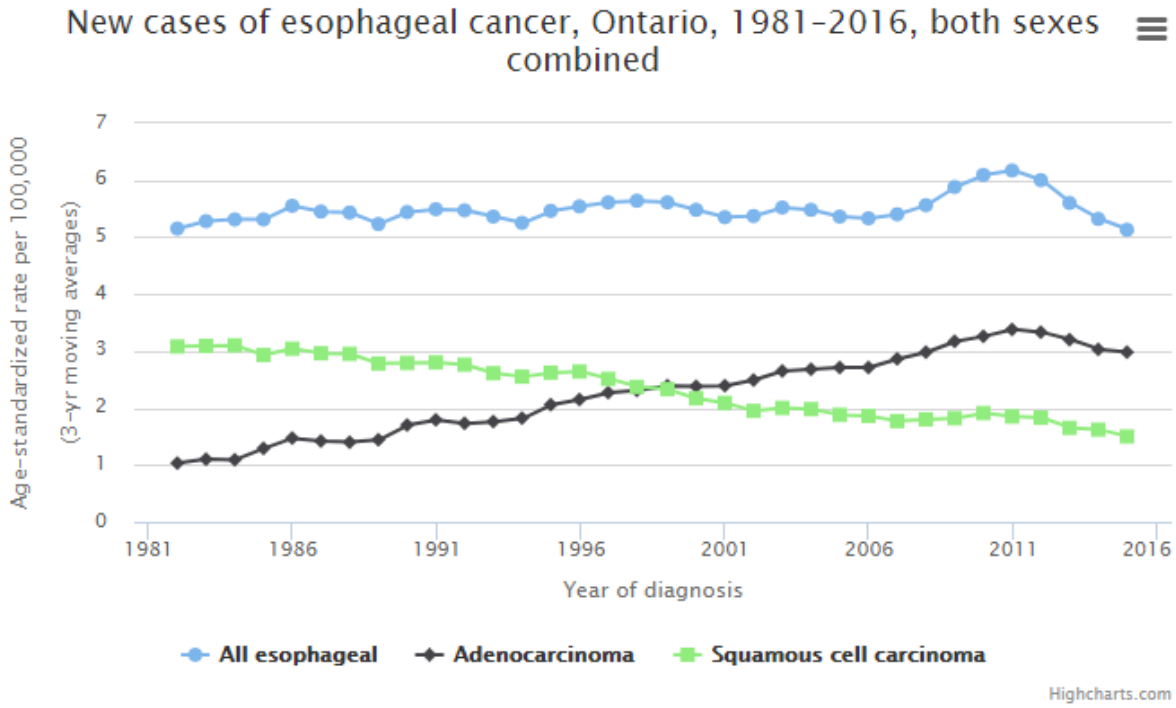
Cancer Care Ontario.Cancer Fact: Incidence of esophageal adenocarcinoma continues to rise. April 2019. Available at cancercareontario.ca/cancerfacts.

Request Data

To request cancer, renal or other health related data, go to **Access Data** .

Figure Data Table

Figure | Data Table



Source: Ontario Cancer Registry, 2018 (Cancer Care Ontario)

Notes:
Rates are per 100,000 and standardized to the age distribution of the 2011 Canadian population.
Incidence rates have been adjusted to adhere to the International Association of Cancer Registries (IACR) standards for counting multiple primary cancers, to allow for direct comparisons of incidence rates over time.
Adenocarcinoma: ICD-O-3 histology codes 8140–8141, 8143–8145, 8190–8231, 8260–8263, 8310, 8401, 8480–8490, 8550–8551, 8570–8574, 8576.
Squamous cell carcinoma: ICD-O-3 histology codes 8050–8078, 8083–8084.

This trend is in stark contrast to the incidence rate for the other main type of esophageal cancer – squamous cell carcinoma – which decreased from 1981 to 2016 at 2.1% per year in Ontario. Similar trends for squamous cell carcinoma have been reported in a Canadian study, [1] as well as in some Northwestern European countries, the United States, Australia, Hong Kong and China, particularly in males. [2]

These opposing trends are likely due to changes in the different risk factors for each esophageal cancer type.

The increase in adenocarcinoma may be related to increasing rates of obesity in

Ontario.[3] Excess body fatness (i.e., overweight and obesity) increases the risk of developing esophageal adenocarcinoma and in 2015, 60.5% of Ontario adults were classified as being overweight or obese.[4] Obesity also plays a role in the development of gastroesophageal reflux disease (GERD),[5] a condition that causes stomach acid to spill into the swallowing pipe, or esophagus. GERD is a cancer risk factor because when stomach acid comes into contact with the esophagus, it can damage it and can cause a condition called Barrett's esophagus, which can then lead to adenocarcinoma.[1]

Squamous cell carcinoma, on the other hand, is most strongly associated with tobacco use and alcohol,[1] both of which act separately and together to increase risk.[6] Decreasing smoking rates in Ontario[7] most likely explain the drop in the number of new squamous cell carcinoma cases.

Although esophageal adenocarcinoma continues to rise in Ontario, there are a few ways to lower the risk of developing this cancer. Exercising regularly and maintaining a healthy diet can help because they reduce the chances of gaining weight and becoming obese. There is no strong evidence showing that drugs used for controlling stomach acid to treat GERD and Barrett's esophagus reduce adenocarcinoma incidence, but certain acid-reducing medications have been proven to prevent the abnormal cell growth that can become adenocarcinoma.[1]

Esophageal cancer is a rare but highly fatal cancer, accounting for 3% (N=779) of all cancer deaths in Ontario in 2016, despite only accounting for 1% (N=808) of all cancers diagnosed.[8] Overall esophageal cancer incidence has changed little over the past few decades, despite the fluctuations in adenocarcinoma and squamous cell carcinoma. Esophageal cancer incidence rates are higher in men (sometimes up to 3 times higher) than in women. In Ontario, incidence rates for men increased significantly at 0.65% per year from 1981 to 2012 and then remained stable until 2016. Esophageal cancer incidence rates in women decreased by 0.7% per year from 1981 to 2016.

Cancer Care Ontario recognizes the need for continued work in partnership with key stakeholders, such as those in public health, to increase healthy eating and physical activity among Ontarians. The CCO Chronic Disease Prevention Strategy provides a comprehensive plan for the way we will work with our partners to reduce new cases of major chronic diseases by decreasing the number of people with modifiable risk factors.

References

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Age-standardized incidence rates (3-year moving averages) for esophageal cancer by subtype, Ontario, 1981–2016, both sexes combined

YEAR	ALL ESOPHAGEAL	ADENOCARCINOMA	SQUAMOUS CELL CARCINOMA
1981			
1982	5.15	1.03	3.08
1983	5.28	1.10	3.09
1984	5.31	1.09	3.10
1985	5.31	1.29	2.93
1986	5.55	1.47	3.04
1987	5.45	1.42	2.96
1988	5.43	1.40	2.95
1989	5.23	1.44	2.78
1990	5.44	1.70	2.79
1991	5.49	1.79	2.80
1992	5.47	1.73	2.76
1993	5.36	1.76	2.61
1994	5.25	1.82	2.55
1995	5.46	2.06	2.62
1996	5.54	2.15	2.64
1997	5.61	2.27	2.51

1998	5.64	2.31	2.37
1999	5.61	2.39	2.33
2000	5.48	2.38	2.17
2001	5.35	2.39	2.09
2002	5.37	2.49	1.95
2003	5.52	2.65	2.00
2004	5.48	2.68	1.98
2005	5.36	2.71	1.88
2006	5.33	2.71	1.86
2007	5.40	2.86	1.77
2008	5.56	2.98	1.80
2009	5.88	3.17	1.82
2010	6.09	3.26	1.91
2011	6.17	3.38	1.85
2012	6.00	3.33	1.83
2013	5.60	3.20	1.65
2014	5.32	3.03	1.62
2015	5.13	2.98	1.50
2016			

Source: Ontario Cancer Registry, 2018 (Cancer Care Ontario)

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